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AN INVESTIGATION OF THE RELIABILITY OF THE BEERY TEST OF VISUAL MOTOR INTEGRATION[1]

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The Beery Test of Visual Motor Integration was utilized in a reliability study with elementary school children. The results indicate sufficient scorer reliability and stability over time to merit its use with young children.

Form-copying has long been considered a valid measure of perceptual-motor development in children. This fact is reflected in the importance of this kind of performance in diagnostic batteries used with children. The Bender-Gestalt Test (1938) has been the most popular instrument in this area. However, despite extensive clinical research, this test is still of limited use for the school psychologist because it requires individual administration and interpretation.

Recently, efforts to define more precisely the import and genetic course of form-copying have led to the development of a new test of this behavior. The Beery Test of Visual Motor Integration (1967) combines the vast research in this area with innovations in test design. The VMI presents a series of 24 designs in booklet form. The ordinal placement of the design is age-graded, and was determined by normative studies with groups of children from age 3 to 14. The booklet can be administered equally well individually or in groups. Administration and scoring procedures are explicit, so that a classroom teacher can perform either task. The provision of a large number of items, together with the option of group administration constitute signal advantages of this test of form-copying over traditional clinical tests. Clear and simple scoring criteria allow both clinical and quantitative interpretation of the child's performance.

The study here reported investigated the test-retest and split-half reliability of the VMI with classes of second; fourth-and sixth grade children.

The children were pupils in a suburban school district of a large midwestern city.[2] The test-retest interval was one week. The test was administered in group form to one class at each grade level. There were 31 second-graders, 25 fourth-graders, and 27 sixth-graders in the sample.

Table 1 indicates the test-retest correlations for the three grades and over all grades.

Insert Table 1 about here

Table 2 indicates the test-retest correlations for the three grades when the grades are split by sex.

Insert Table 2 about here

These data indicate that the test possesses sufficient reliability to be useful with children in the elementary grades. There are no significant differences in the reliability of the test between boys and girls.

Table 3 give the inter-scorer reliability coefficients when the test is scored by two independent scorers. The scoring was done by teachers and advanced undergraduate students who were studying for their teaching certificates.[3] This procedure was used to obtain reliability data which would be representative of the test's use by teachers. The data indicate that the scoring criteria are explicit, and yield high consistency across scorers.

Insert Table 3 about here

Split-half reliability was computed using Kuder-Richardson Formula 20. Table 4 reports this data over-all, and by sex. The high coefficients indicate a high degree of internal consistency in the placement of the items.

Insert Table 4 about here

The data reported here indicate that the VMI possesses a sufficient degree of both test-retest and split-half reliability to merit its use with elementary school children. The ease of administration and scoring should lead to the wide utilization of this test for the screening of perceptual motor deficiencies in young children.

Footnotes

[1]The research reported herein performed in part pursuant to Contract OEC-3-6-061784-0508 with the U. S. Department of Health, Education, and Welfare, Office of Education, under the provisions of P. L. 83-531, Cooperative Research, and the provisions of Title VI, P. L. 85-864, as amended. This research report is one of several which have been submitted to the Office of Education as Studies in Language and Language Behavior, Progress Report VIII, February 1, 1969.

[2]We express our appreciation for the cooperation of the principal and teachers at Nankin Mills School, Westland, Michigan.

[3]We wish to acknowledge the time, effort, and cooperation of students who participated in this project: Catherine Adams, Mary Trudell, Carol Williamson, Theora Piech, Paul Kochojda, Jeffery Grimorel, and Martha Most.

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Table 1

VMI test-retest correlations for three grades and over all grades

Grade	Scorer 1	Scorer 2
2	.45	.53
4	.72	.75
6	.57	.71
All	.72	.75

Table 2

VMI test-retest correlations by sex for all three grades and over all grades

	Scorer 1		Scorer 2	
Grade	Boys	Girls	Boys	Girls
2	.44	.47	.44	.30
4	.77	.68	.73	.60
6	.36	.91	.72	.70
All	.51	.72	.85	.77

Table 3

Inter-scorer reliability by two independent scorers for three grades and over all grades

Grade	15-16 Pre-test	17-18 Post-test
2	.47	.44
4	.71	.74
6	.77	.86
All	.71	.74

Table 4

Split-half reliability by sex for three grades and over all grades

Grade	Boys	Girls	All
2	.65	.75	.70
4	.61	.66	.70
6	.80	.79	.79
All	.84	.82	.74